# OBSERVATIONS

ON THE

# ANGINA PECTORIS,

# GOUT,

AND

# COW POX.

*BY GUSTAVUS HUME, ESQ.*

ONE OF HIS MAJESTY'S STATE SURGEONS.

Dublin.

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# DEDICATION.

TO

JOHN PURCELL, ESQ. M. D.

AS the following sheets contain both medical and surgical observations, and that you were formerly a professor of anatomy in our University, as well as a distinguished and successful practitioner of physic, in which you still continue deservedly eminent; permit me to present you with this small performance. And, though conscious that you can scarcely receive information from any

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hing that I could offer, yet the brevity f the work, together with some obser- ations not entirely obsolete, will, I flat- er myself, lessen the necessity of my naking a further apology for requesting he favor of your perusal.

I have the honor to be,
Dear Sir,
Your obliged Friend,
And very humble Servant,

*GUSTAVUS HUME.*

# PREFACE.

PREVIOUS to the cautions, which I shall hereafter offer, against too general, and continued employment, of some energetic medicines and measures, especially in complaints whose causes are doubtful; I consider myself pledged to bring forward such proofs to an impartial reader, as may warrant any objections which I shall make, to the present treatment of many disorders, whose salutary termination ultimately depends on critical appearances, produced by natural efforts; but, in particular, to the conduct of a complaint called Angina Pectoris, that has lately become more noticed than formerly, and for which a learned modern writer recommends bark, opium, and, in some instances, cold bathing.

bathing. How far those medicines, or that measure, ultimately tend to retard and counteract the salutary exertions of nature, may be judged of, from the following cases, which could be supported by others, equally evincing effects similar to those I here relate.

In March 1780, I prescribed bark for a lawyer, who laboured under an ague, and was likewise afflicted with a disorder in both his eyes, for which an issue had been established, consequently discharging matter; and, after his having taken the bark for nine days, he then complained that the discharge from his issue had first changed to blood, afterward the part became entirely dry; I therefore directed that the bark should be discontinued, after which, in seven days, the matter reverted to its natural and regular state. However, as the continuance of his disorder required more bark, it was accordingly resumed, and in the same space of time, the

the blood came on as before, his ague then became cured, and, in a few days after the bark had been entirely laid aside, the discharge resumed its natural state. This case serves to prove, how unnecessary, nay, indeed, injurious, bark is, in the treatment of wounds among subjects of good habits; though it may in a few instances be proper, to abridge discharges, when we are certain that they are only supported by absolute relaxation, without remains of morbid affection; but in this we should be perfectly satisfied, before any astringent comes into contemplation.

A navy captain, who, on the day that he was ordered to sail, was seized with a fit of the gout, which inflamed his great toe, so much as to prevent his making any attempts to walk; but, recollecting to have heard that bark would restrain the progress of gout, in its most inflammatory stages, he accordingly commenced taking it, and, in the course of five

five days, the toe became quite pale, and all pain ceased. However, he was shortly afterterward affected with head-aches, that continued till the succeeding spring, when the gout came regularly on, which freed him from every complaint. So far have we proofs of the astringent, consequently restraining powers, of this medicine. Yet from a well timed, and frequently remitting employment of it, in such cases as astringents are evidently indicated, the most beneficial effects often arise, both in physic and surgery.

A lady, who lived in a perpetual scene of amusements, was suddenly seized with a profuse purging; and, being impatient under a complaint, which prevented her performing a part in a private play, she, by the advice of a nurse-tender, took such a quantity of tincture of opium, as to render the entire intestinal canal so powerless, as to be unable to discharge any fœces, which afterward

ward became so dry and hard, as to require foreible and tedious means to dislodge them. However, after some days, by the aid of gentle aperients, and generous sustenance, taken rather eool, the intestines recovered their natural tone. Here then, as well as in the former eases, have we proofs of the powerful effeets, of both bark and opium, on solids and fluids; either of which medicines, though in many instanecs indispensibly necessary, yet, if too long continued, especially when administered in large quantities, would eertainly, in a great degree, though by opposite operations, restrain every natural power, to form, mature, and ultimately to remove disease, partieularly in such cases as either expectoration, or diseharges by stool, were to be considered as the salutary efforts of nature; the bark most exeeptionable in the commenecment of disorders, espeeially if in any degree inflammatory; the opium in a latter stage of disease, particularly if attended

by

by debility. The first, except in a few instances, might be substituted, and admits of modification, or counteraction, when too astringent in a pure state. However, too great reliance on that art of combining medicines, of opposite qualities, which afterward in the stomach shall become decomposed, has, in some habits, where bark was so managed, been productive of very bad consequences. Therefore an affection of the chest, or the liver not being perfectly free in its secretions, or a fever not arrived at its crisis, rather interdict the employment of this medicine with almost any combination, except the habit should be relaxed to an extreme; or in agues, and some humid mortifications, when other means had failed: but the opium, in various cases, both medical and surgical, cannot be dispensed with. And as to the effects of cold bathing, in particular constitutions, and circumstances, they are stated in a subsequent case. I must however observe,

that

that too indiscriminate a stricture, on the employment of any efficacious medicine or measure, without the clearest proofs either of its inefficacy, or pernicious effects, looks like prejudice, as too great a partiality for its extended use betrays credulity; and, though many diseases are attended by symptoms nearly similar, yet shall each complaint arise from an opposite cause, consequently require a different remedy. For instance, all retentions of urine are the same in effect, yet some may come on either from inflammation and spasm, others from such a relaxation of fibre, and atony of nerve, as shall render particular muscles, and the entire bladder, so powerless, as to become unable to expel its contents. In the first case, blood-letting, gentle aperients, warm bathing, mild diluents, and a certain quantity of opium, either by the mouth, or in clysters, are principally useful, and frequently may prevent the necessity of employing any instrument; whereas, in the

latter

latter instance, after evaeuating the bladder by a catheter, whieh should in many cases be preceded by a bougie, and ought not, in subjeets advanced in life, to be too long delayed, nor too early used for children or young boys, in whom this complaint frequently oeeurs, and shall give way in consequenee of bleeding, clysters, and warm bathing, the retention arising from absolute loeal inflammation. I must here remark, that, though in advanced life a partial debility may be the general eause of this disorder, yet, from a diminution of insensible perspiration, other seeretions, especially the urine, naturally becomes aerid, though copious at times, and, if allowed to remain long in the bladder, shall irritate, and cause temporary spasm. When this is the case, the body should be eovered with flannel, and a sufficient quantity of any emollient dilution must be drank, taking care that it shall not overcharge; and I have observed, that, in propor-

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tion as the urine grows more mild, irritation shall gradually abate; yet our daily reliance must be on the instrument, and we generally find that complete recovery seldom takes place, before such time as the juices become entirely renovated. From similar reasoning, observation, and discrimination, we are enabled to act most advantageously for any patient, especially where complaints form in the habit, from innate causes, most of which require natural efforts, supported by timely exertions of art; and, whenever any medicine is suggested to be only experimentally employed, especially if it be so potent, that a certain quantity might either preternaturally elevate, or fatally depress vital powers, we should accurately decide how far such could possibly be dispensed with, or, if administered, how sparingly with effect; ever supposing, that more honor, security, and self-satisfaction, arise, from foreseeing and aiding the regular efforts of nature, especially

in

in constitutional diseases, than by forcibly attempting a removal, or suppression, of symptoms, frequently mistaken for primary causes, by too early and powerful an exertion of art; and the medical cases, in which we are most pressed instantly to act, are, when either blood-letting, purging, clearing the stomach, restoring suddenly suppressed perspiration, any mode of depletion, and frequently elevation of depressed powers, by the most active measures, are obviously required. Such observations, though they may appear obsolete, yet are now certainly not unnecessary; as some learned men, especially at or near to much resorted water drinking places, who consider themselves adepts in chymistry, consequently the more experimental, are principally followed from being reputed bold, eccentric prescribers; which character is, at best, as much inferior, to that of a cautious yet efficient physician, as a modern partizan is to an approved experienced general, whose reputation, though

though ultimately depending on success, yet the preservation of lives committed to his charge, should be the primary consideration. However, in a state of imminent danger, omissions are more criminal than even the most hazardous attempts, though unsuccessful, if founded on that degree of hope which it is reasonable to entertain in the most desperate and obstinate cases. And if the cause of any disorder, or the extent of any accident, be clearly understood, no reasoning practitioner can ever be supposed to transgress the established rules for relief, in both physic and surgery.

ON THE

# ANGINA PECTORIS.

## CHAPTER I.

THE angina pectoris has been lately mentioned by an eminent physician, Doctor Parry of Bath, as caused by ossifications of the coronary arteries of the heart; and certainly ossifications of those small vessels, as well as of the aorta have sometimes been discovered on opening the bodies of persons who were supposed to die of this disease. The symptoms which I have observed attendant on such ossifications, were a constant pectoral oppression without actual pain, a frequent involuntary sighing, an horror at falling asleep, likewise an irregular enfeebled pulse, daily becoming more weak, tremulous, and intermitting; most of

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which symptoms gradually encreased, so that pulsation was not perceptible for some days before death. Therefore this disorder may be called chronic, and it seldom commences before rather an advanced period in life; whereas the true angina pectoris, which may with more propriety be stiled angina cordis, or heart spasm, originates much earlier, by painful sensations of the chest, but principally in the region of the heart; and is succeeded by periodical spasms, most perceivable on lying down, or in quick walking, all which encrease, yet intermitting, and though life in most instances should not soon terminate, yet death always happens suddenly. This complaint may then be classed among the acute, though founded on a chronic cause, and as it has not been noticed by ancient medical authors, we may likewise consider it as symptomatic, connected with, or in a great degree the effect of some established constitutional disease, rather than original, it being rarely known to have presented itself

where

where seeds of gout, scurvy, or some other attached malady had not preexisted, either in the individuals so affected, or amongst some of their ancestry, which from suppression, counteraction, or where the innate strength is unequal to a regular forming, maturing, and expelling the effects of a primary peccant cause, by the natural modes, or any favourable substitution; then, in such cases, the head, chest, or some principal part of the nervous system, becomes more or less affected, and consequences are sooner or later fatal, in proportion to the constitutional impulse, causing such morbid action; which is in a great degree exemplified by the process of a small pox, even when brought on by inoculation, after the most correct preparation; where we have frequently observed a patient, especially if very young or delicate, to sink under repeated convulsions, before any natural exertion of the constitution could liberate the nervous system, by a protrusion of

 eruptions,

eruptions; and this happens, not so much in consequence of any peculiar malignancy in the infection introduced, as from constitutional inability to expel the virus in the usual time and regular form. Deaths have likewise been caused, but not so suddenly, from salutary habitual discharges suppressed, or critical eruptions checked; the former, by astringent medicines; the latter, by a reducing regimen, or repelling lotion, especially if on the face, and not unfrequently by too long continued taking of bark. But the most general cause of angina cordis, derives its existence from immature gout, more frequently hereditary than acquired. It may likewise proceed from that disorder, either repelled, or naturally retrocedent, which of late years is more likely to happen than formerly, when fewer experiments were made to counteract or restrain that disorder in its natural course. There is not any disease, that so instantaneously flies from one part to another, as the gout does, likewise

from

from the surface to the centre; and in those changes has so often proved suddenly fatal: and the danger is always in proportion to the necessity in the animal economy, for a perfect salutary preservation of the organ, on which that disorder happens to rest. If, fixing in the lungs, coughs and laborious breathing ensue; if, attached to the membranes of the brain, head-aches and sometimes delirium present; if in the stomach, excruciating spasmodic affections, which have frequently, though not universally, been removed by strong cordials; but when seizing on the heart, or on the nerves which regulate the motion of that main spring of life, death must soon be the probable consequence: therefore, if there is any chance of removing or counteracting the angina cordis, it must arise by the employment of different remedies from what have generally been used in most other morbid affections of interior parts; in many of which advantage is obtained, at least a temporary

suspension

suspension, or mitigation of paroxisms, from opiates, either by the mouth or in clysters. But, in this particular case, I fear that every sedative, especially if taken in any considerable quantity, would merely tend to debilitate, therefore might damp the efforts of nature, to extricate herself from that dangerous arrest of internal disease, consequently, prevent the morbid cause from being thrown off, by the regular, or any substituting form. Therefore, when the disorder is decided to be an actual angina cordis, which in its early stage might only have affected the chest at large, after first opening the bowels, which is best done by calomel, as it seldom goes farther than to unload; then to administer a vomit of a spoonful of ground mustard-seed, in a pint of warm water: however, if the attack be very sudden and alarming, we may begin by the vomit, preceded by a clyster; and, during the operation of vomiting, strong camomile, or horse radish infusion, should be drank, and in some

languid habits warm Port wine and water. This process may be repeated every second or third night, and alternated by hippo wine, if less disagreeable, for in such desperate cases time should not be lost; likewise, during the act of vomiting, it may be additionally effectual, to continue the feet immersed in warm horse-radish water; from which process repeated, I have known the gout brought on, where every symptom of angina cordis was manifest; therefore, I should not entertain any doubts about the propriety of this remedy, except that a patient was, from plenitude, form, or otherwise, under constitutional objections to the taking of vomits. Yet, when we observe subjects of every description to puke so incessantly on board ship, likewise in a state of ebriety, and as man possesses this natural advantage, which the generality of brute animals have not, we may be the more encouraged to hope, that benefit without danger shall result from this measure. The salutary

effects

effects arising from vomiting, evidently appear by that exertion, throwing out variolous eruptions, forwarding an erysipelas, or terminating unremitting hæmorrhages; the latter by propelling sanguinary circulation to the most distant parts from the heart, consequently, distributing blood more equally through the entire vascular system; from which effect such partial flow often stops entirely, though, during the first efforts to vomit, the blood will spring out more rapidly, but soon ceases. This measure, though formerly too generally persevered in, has of late years been almost universally neglected, and with much injustice. A rage for vomits commenced in Ireland about the year 1735, when Dr. Robinson, the state physician in that kingdom, endeavoured to prove mathematically, that the action of vomiting might be safe and beneficial, in almost every instance of declining health; but the injury done by such a shock, especially in obstructions both external

external and internal, together with the disagreeableness of that operation to most patients, occasioned vomits suddenly falling too much into disuse. However, in such cases as demonstrably they must be beneficial, and that there is no other measure so likely to be of equal service, all scruples should be laid aside.

I must here repeat that, in almost any stage of this complaint, however desirous a patient might feel to take an opiate, such should not be given except under very particular pressing circumstances, and then combined with ginger, essence of peppermint, garlic, Cayenne pepper, or some aromatic; any of which may be separately used, or with food, if the opium was found too relaxing. I likewise fear that the bark, especially if taken for any continuance, would prove equally injurious, though from a contrary effect. Could we indeed discover a medicine that would brace internally, and at the same time relax

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the surfaee, so as to produce eruptions, or forward any salutary rejection of the peecant cause, every good intention would be effeetually answered. But as bark strengthens principally by eontracting, sueh operation, if continued, would ultimately extend to the minutest vascular and nervous termination on the surfaee; therefore, in all such complicated doubtful complaints as the one in question, I recommend to the unexperienced practitioner, to be eautious in forming his prognostie; but, having aetually deeided on the cause and state of this or any other fixed disease, then steadily to persist and follow up the measures whieh he had deliberately commeneed by, and that no material change should experimentally be made, ever concluding that there are but two rational modes of treating disorders, either by support or reduetion; and, having once determined on the proper proceeding, not suddenly to vary without the best founded motives for the alteration,

teration, as a reasonable time must pass over, before any complaint, especially if interwoven with the system, can be so disengaged, as completely to be discharged; and that, in all constitutional affections, natural efforts, judiciously aided, ultimately tend to forward every regular crisis most effectually, or to produce some salutary substitute. However, in time of distress and danger, the exertions of art, and employment of energetic measures, so as not to confound any natural process, should stand foremost in the mind of every practitioner. I have previously mentioned that angina cordis arose from gout, scurvy, or some constitutional disease, either suppressed, counteracted, or the innate power unequal to the formation and expulsion, and not from ossifications as lately supposed. I therefore flatter myself that the following cases will sufficiently prove how far such an opinion is well founded. A gentleman high in rank, and of corpulent body, died sud-

denly,

denly, at the age of forty-eight, after having regular fits of the gout, which commenced early in life, but did not latterly present in any satisfactory form. He was for some weeks before death, at intervals, seized with every symptom of angina cordis, and expired suddenly. On opening the body, I could not discover either ossification, polypus, affection of the brain, or any other cause to which I could impute his death, except that the heart was much contracted, and smaller than what we might expect to find in a subject so large and proportionably made. It must then be supposed, that a morbid affection of the nervous system, though not discoverable, which, from our ignorance of the action of those parts, must often be the case, was the cause of his sudden death.—I was likewise acquainted with a robust young man, who, hoping to avoid so much gout as had been attached to his family on both sides, commenced and persevered in a strict vegetable

diet.

diet. In some time he complained of every symptom attendant on angina cordis, and died suddenly. On opening his body, the heart and arteries were found in their natural state; a nervous affection must then have been the deadly cause.—I some time since attended a young man, whose father and brothers exhibited the gout at an early age; but he, being pale, relaxed, and nervous, though corpulent, did not throw it out in any shape. He then for an entire year complained of oppression, with spasms in his chest, accompanied by an intermitting pulse, and died suddenly. On opening his chest, which was rather confined, the contents appeared lax and large, yet no obstruction evident; therefore I do suppose that his death was caused by a defect of natural energy to form, mature, and ultimately to expel the innate disease, which mortally affected the heart.—The following occurrence in practice confirmed my confidence in the efficacy of vomits to bring forward the gout,

if

if an habit was predisposed to that disease. I was much connected with a miserable nervous valetudinarian of forty years old, who lived principally on chickens, fricasied, and from his infancy could neither eat nor bear the sight of rabbits flesh. On a particular day, after having taken the usual meal as supposed, he told his servant that the chickens, which he had eaten did not sit well in his stomach. The man replied, that it was rabbit by mistake, and not chicken. He instantly became sick, and was seized with a vomiting, which continued with very little remission for twenty-four hours, when an inflammation appeared over the right foot, which terminated in absolute gout, and since that period his health has been much restored; but, whenever indisposed, he bathes his feet, and takes a vomit, which, though it does not always produce the gout, yet perspiration and rest generally follow.—I recollect, some years ago, to have visited a gentleman of a bilious habit,

whose

whose family had been subject to gout; but, being in an active professional line, he employed cold bathing to keep off this greatly dreaded disorder, which would have interfered so much with his necessary business; and, after pursuing that course for some time, he lost his colour, though retaining flesh; then palpitations, accompanied by slight spasms, came on, till at length he expired suddenly. Possibly had cold bathing not been resorted to, and a proper regimen persisted in, the gout might have appeared, which would most likely have averted this fatal stroke.

An opinion at present prevails, especially in Great Britain, that for some subjects cold bathing, between the periods of expected gouty returns, is safe and beneficial. However, such practice has, in my observation, been attended by most fatal consequences; the strongest instance of which, within my recollection, was in a gentleman thirty years old,

old, whose ancestry had all been subject to the gout; and he, on getting clear of the first fit, commenced a course of cold bathing; but after some months the glands of his throat began to swell, and inflame, for which different remedies were employed, but without effect; the parts then oozed out a serous discharge, and, on examination by the probe, I discovered large cretacious formations in both glands, which I extracted, and in a few months after the apertures became healed, he was seized with spasms in his chest, and died suddenly on getting out of bed, though latterly he had used every means to produce the gout, yet it did not present. From this, and many other instances, we then have sufficient reason to suppose, that the angina cordis is most frequently caused by gouty affection: however, it may likewise arise from the seeds of some other disease latent in the system, and restrained from making its natural exit, especially in habits where blotches

on

on the face have ever presented. I must observe, that eruptions on that part, commonly called scorbutic, are too generally considered, by some who are so affected, especially females, as merely local; whereas, I suppose them to protrude in consequence of a defective secretion in the liver, and sometimes from a state of more or less obstruction in that bowel, founded on constitutional causes, which is evinced by more or less yellowness on the surface. The only reason that I can assign for such eruptions coming on the face, in preference to other parts of the body, is, that from exposure to the open air, perspiration is not so free in that situation, as where the skin is protected by clothing. The like circumstance is observable in the confluent small pox; where we find double the quantity of pustules to push out on the face, to what are found on three times more surface in any part of the trunk, or covered limbs.

There is no morbid appearance, which presents on the human frame, that either sex, especially the female, wishes so much to get clear of, as what is vulgarly called face scurvy. It is on this account, that numerous local remedies are daily advertised, as infallible cures for such external effect of interior cause; and rigid abstinence, with the employment of acids or bark, more effectually extinguish those eruptions, than any other course. However, the result of such practice is generally fatal; many instances of which I have seen, but one of those that I lament most, was in a senior fellow of Trinity College, Dublin, whose father was born in the south of France, and, on his coming into this country, from change of climate, and grosser food than what he had been accustomed to at home, acquired a red nose, and eruptions on his face; those appearances descended to his son, who was resolved, by regimen and bark, to banish what he consi-

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dered so great an evil: he, accordingly, commenced a vegetable diet and water drinking; his face then gradually grew pale, and palpitations came on, which, by the use of bark and opium, were kept down, and, though warned of the danger arising from this improper course, yet he persisted, till he expired suddenly, without any other complaint than palpitations. Therefore, it is evident, that he died of the angina cordis, in consequence of an acrid innate humour, which, being restrained, attached itself fatally to the nervous system.

Such improper management possibly had a worse effect on this gentleman, of foreign descent, than it would have had on a native of Ireland, or any European parts of the British empire. I do suppose that many, born in the southern parts of France, whose complexions are dark, derive their colour more from formation and operation of the liver, than from climate, but by not eating

an over quantity of flesh meat, nor drinking strong malt liquors, neither of which are readily to be procured in their own country, keep that bowel in such a salutary state, as to require no particular attention; but in northern kingdoms, where the sustenance is more gross, and insensible perspiration not so regular, gout, erysipelas, and eruptions in various places present, which, once established, are dangerous to restrain or repress; more especially in the second or third generation, when the primary and partly accidental cause in the first, becomes fixed, and in some degree organic, in the future offspring; therefore, though a regularity of living, and a choice of diet, may in many instances prove useful to correct, yet rigid abstinence, or means to restrain, which bark or strong acids will effect, must ever be attended by dangerous consequences. So far do I attribute angina cordis to humor repelled, or restrained, and may be fatal, sooner or later, in proportion to any neces-

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sity in the constitution, for a protrusion of such acrimony; having observed whenever our own habit rejects acrid humour, such being checked or repelled, so as to retire into the system, proves more noxious than almost any foreign matter introduced; for, if the constitution could have longer endured such morbid overcharge, it would not have been rejected. Another instance, equally evincing the fatal effects of acrimony barred of its exit, in any manner, was in a lady, whose cancered breast I cut off in the year 1770. Her constitution was good, except as to the cancer, and, on the day, after the part became entirely healed. She then complained of a palpitation, and expired suddenly, without even a groan. Can we here attribute her death to any other cause, than that the habit, being too suddenly deprived of its morbid deposit, and subsequent discharge of noxious humour, vented a remnant of the primary cause, on such parts of the nervous

system

system, as were most essential for vital support? I must here regret my permitting her to take bark, to precipitate cicatrization, as she was impatient to leave town. This certainly was a case of angina cordis. How far the bark occasioned premature healing, thereby having prevented a complete clearing of the habit, by a longer and uninterrupted continuance of discharge, I cannot decide; but I am certain that any ulcer or wound shall be more naturally, consequently more safely healed, by the regular and gradual diminution of discharge, than by any astringents either externally or internally employed; and that dry dressings, covered with the most healing plaisters, shall effectually answer all ends of topical applications; and, if any corrector of the juices be necessary, such is only to be employed agreeably to the original cause. From every information that I have obtained, on the few bodies which I have opened, where vessels were discovered

ossified,

ossified, I am led to suppose, that a bony formation of membranes, vessels, or muscular fibres, partly arises from overaction, in addition to age, original formation, and constitutional disposition, scarcely to be accounted for, which, when affecting vessels only, may be occasioned by too rapid and irregular a circulation, possibly from some irritating cause existing in the juices, consequently over exciting particular nerves, membranes, and muscular fibres; but in no instance do I suppose ossification to proceed from absolute disease in the system, either naturally commencing, or accidentally acquired; it being well ascertained that morbid habits, especially such as are gouty, take much longer time to complete the callous in a fractured bone, than where no such disease existed, and when an union was formed, has frequently given way on the slightest accident.—The following instance in some degree confirms, or at least countenances an opinion,

that

that ossifications may form in the most healthy subjects from accidental causes. I some years ago opened the body of a young mechanic, who died at the age of twelve years. His father forced him to work, from his sixth year, with a mallet and chisel, at laborious parts of the carving trade, for more than twelve hours daily, and, with other employment, did not allow him sufficient time for refreshing repose; which unremitting duty, with such bodily hard labour, brought on so great a tension and rigidity of fibres, as to cause such rheumatic pains, sometimes attended by fever, as terminated in death, not preceded by any pulmonic affection, or interior consumptive symptoms. On minute examination, I found that many muscular fibres had nearly become bony, and the right elbow joint inflexible, likewise the right pectoral muscle indurated; but the left arm, not being so much in action, was not so rigid, yet in so unnatural and tense a state, that it might

might be presumed, had he lived long under such hard labour, complete ossification must have been the consequence. His brother, who had been treated with equal severity, did not long survive, becoming what is vulgarly, in cattle, called hidebound. Here then can we in some measure account for the consolidating effects of overaction on muscles, membranes, or vessels, even at an early age, and in healthy subjects. This likewise explains the reason, why arteries immediately connected with the heart, consequently in strongest action, should ossify, when these more distant suffer no change; but in no part, can actual disease be a primary cause of ossification; whereas cretacious formations are principally discovered in gouty habits, and sometimes in abscesses slowly maturing, in languid acrimonious constitutions, even at an early age. They have been likewise found in the centre of what are commonly called wens; and when these concretions are formed, they

they often cause equal irritation, as any extraneous body creating inflammation, till they either make their way outwardly, or have been extracted; therefore such morbid affection can never unite itself, or directly enter into the formation of any parts, so as to become permanent solid substances. Hence we may conclude, that angina cordis, and ossification, arise from different causes, consequently call for opposite treatment. The first by energetic measures, similar to what I have mentioned; the latter requiring so much relaxation and management, as might possibly counteract, at least retard, such tendency to a consolidation of parts, as must ultimately put an end to circulation and existence. I lately was called to a gentleman advanced in life, who had for a number of years, an ill-conditioned ulcerated leg, which, by bandage, and various drying applications, was forced to heal, contrary to the opinion of his physician. He was soon after seized with

painful

painful sensations in his breast, and intermitting pulse, afterward suddenly expired. Had such treatment of the ulcer remained undiscovered, it would have been supposed that he died of angina cordis, as the primary disease. Therefore, though this newly discovered disorder, may in most instances arise from gouty origin, as before mentioned, yet the chest and heart may become mortally affected, from other causes; and, notwithstanding that ossifications of vessels might frequently have been detected, on opening dead bodies, yet we are to look farther, rather than to accede to this invariable cause, of the disease in question, which, if so founded, is certainly beyond the power of art to remove.

I cannot conclude without acknowledging, that a discovery of angina pectoris was supposed to be made by the learned Doctor Heberden, who, in the posthumous publication of his observations, gives encouragement

to

to hope, that the gout may yet admit of a cure; but, from the unsuccessful attempts, that I have seen made, entirely to free the habit from this constitutional malady, especially by any active measures medicinally, or too much reduction in diet, I am led to conclude that, in proportion as the gout, or any other very critical appearance, which is the effect of a constitutional cause, be suppressed or counteracted, angina cordis shall become more general; yet there is scarcely any gouty subject, in whom regimen may not produce a *mitigation* of paroxisms. Though experiments to obtain a radical cure, generally prove both hazardous and ineffectual.

However, I flatter myself that the following reasoning, though partly conjectural, on the probable origin and increase of the gout, with some rules for a general conduct of those, who are disposed to that disease, may be both satisfactory and beneficial.

ON

# THE GOUT.

## CHAPTER II.

FROM the sedentary and voluptuous course that many men have persevered in, to advanced years, in whom no symptom of gout ever appeared; and from others who early became martyrs to that disease, though having pursued the most temperate lives; we might from hence be led to conclude, that particular organization, was in a great degree a fundamental cause of this disorder. However, we may observe that, in the cyder shires of England, and in some other parts of that kingdom, where strong beer is a principal beverage, the gout and gravel, especially the latter, long preceded by cramps, are

are prevailing complaints, even at an early age, where no natural debility, or other constitutional cause, previously existed. The cyder, from acidity, in course of time, renders the fibres arid, by which, insensible perspiration is gradually restricted; consequently, such a change in the habit, as its continued interruption must occasion, sooner or later, forms the seeds of disease, operating like an heterogeneous fluid in the system. Therefore, if this so important a secretion be not restored, or casually substituted, either a gradual decline of health must commence, or some chronic disorder form. The beer likewise, from its strength, and tendency finally to become acrid, produces not only effects similar to the cyder on the more tardy circulation, especially in membraneous parts, but, from its viscidity, causes an unnatural corporal increase, giving rise to various obstructions, particularly in parts where the lymphatics are most minute, consequently the

the circulation naturally languid, from which the gout generally fixes on the joints, especially such as are most distant from the heart. Among the higher orders, claret, or any other wines, that in time become acrid, in addition to a sedentary life, and late hours too frequently spent at play, or in some equally anxious pursuits, which occasion such mental affection, as to interrupt natural secretions, especially biliary; all those causes contribute additionally to create this disorder, to which females, from laxity of fibres, are not so subject, though they might chance to be both sedentary and intemperate. Here then have we arrived at one of the primary causes of gout, especially in the British empire, and a few of the northern countries, where perspiration is not so liberal as in more southern climates; to correct which, at least in the first generation so affected, or, indeed, at any period, where youth and natural strength of constitution might warrant reform,

reform, a reasonable change in living, especially if sedentary and voluptuous, appears to be our most rational resource. I have observed, that gouty subjects are either corpulent and sanguinary, or sallow though adipose; some others arid, thin, and pale. For those of the first description, reduction in flesh-meat and wine is more safe, especially at an early age, than in the latter instances; and for either habits, particularly the two first, an open state of body is indispensibly required, which is often effected by what in this country is called stirabout, or coarse bread, likewise whole mustard-seed, taken by a spoonful, wet with water; and as costiveness frequently is caused, by a degree of debility in the bowels, all fluids should be drank rather cool, especially in summer; and should it be necessary to resort to medicine, the aromatic pill, combined with assafœtida, or James's analeptic pill, shall safely answer. But in each of those constitutions, particularly the

thin

thin and pallid, when the gout presents on any part, especially if swelled or inflamed, the bowels should then remain costive for two or three days, afterward only freed by an emollient clyster, or mild purgative; from the same reasoning, that, if an eruption, which it is the intention of nature to mature, comes completely out, for instance, the small-pox, the body naturally continues bound for a certain time, and though in that state a clyster may occasionally be advisable, yet purgative motions provoked, at this period do mischief. Such observation seems now necessary, as the present practice in most disorders, is too indiscriminately by medicine, to procure a regular motion daily. Doubtless, in perfect health, and in many indispositions, a free state of bowels may be absolutely necessary, especially where the mode of life before confinement, might have caused an overcharge, or where the patient was considered bilious; but in a warm room, perhaps

in bed, where perspiration carries off some redundance, too frequently evacuating, by purgative medicines, particularly at the period of nature's maturing the gout, is certainly injurious, at least before such time as the inflammation has come to its fullest extent. However, should the head feel loaded, eyes not clear, or lower belly tumid, a stool ought to be procured, which, in all such cases, is most safely effected by a clyster; yet if any person objects to this remedy, and rather chooses a purgative dose by the mouth, such should not be drastic, but merely calculated to unload, which one grain or two at most, of calomel, combined with four grains, of aromatic powder, will effect, particularly for the first trial, but, if repeated, the quantity must be encreased; and I should prefer this medicine to commence by, as it often stimulates a discharge of bile, the lodgment of which, aggravates the paroxysm; but, as most invalids become partial to a particular

purgative,

purgative, the only caution necessary to observe, is, that such should not be too potent, or cooling. Some experimental practitioners recommend the application of a blister on the inflamed part, which certainly causes, what appears a critical copious discharge; however, the deposit of disease is thus only prematurely, and partially vented, so as to leave a remnant, sufficient soon to relumine; besides, the skin, where the blister was applied, afterward becomes so impervious, as not to admit of insensible perspiration for a length of time, consequently that part shall remain for months in a great degree obstructed; and I never recollect of a blister being applied, on a critical inflammation or eruption, when tending to a natural termination, by suppuration in any manner, especially if they had gone through the like process before, where bad effects were not afterward perceived, either by an affection of some interior part, or, at a future period, a similar

appearance, less effectual, though attended by more aggravated symptoms. However, in many cases of long continued fixed local pain, without hope of abatement, or in acute attacks in the chest, or side, where we would wish to check the progress of inflammation in such parts, though to fall on situations less dangerous, or distressing, the effect of a blister may be both safe, and answer the designed intention. Such discrimination is not now improper, as blisters are too indiscriminately applied, and are by the public supposed to be scarcely injurious in any case, or part. Combed wool for a covering is generally applied; certainly it lies light on the limb, but great care ought to be taken to free it from the oil, which might impede perspiration, that some think right to encourage, by the vapour of warm water, which application is likewise reported to bring out much gouty matter, consequently to render the fit shorter; but this process, if tried, I would not wish to repeat,

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at least till the inflammatory stage of the paroxysm was over, and merely to continue the fleecy hosiery, which should fit quite easy, pressure being in all such cases the greatest repellant.—I recollect an instance of an athletic young gentleman, whose first appearance of gout had been repelled by the pressure of a tight boot, on which, all pain ceased, and then a bleeding at the nose came on; afterward eruptions were thrown out on his face, which continued, and he never afterward could be so treated, as to have any return of absolute gout, though his father lived to advanced years, having a regular annual fit, without any appearance of scurvy. Equally bad effects have I observed from a drastic purge, or stibiated tartar, the latter forcing perspiration too copiously, which effect, in many cases is generally succeeded by extreme debility. Therefore, in gouty habits especially, when the paroxysm is supposed not distant, we should be cautious neither to reduce,

duce, nor overcharge with potent liquors; and, if any regimen were to be decided on, gradually to abate the primary cause, of which the gout is but an effect, such should not tend absolutely to debilitate.

It has been early and long supposed, that a luxurious and sedentary life, creating an overcharge of the liver, lays a foundation for this disease. Doubtless, stagnated bile, in the gall bladder and bile ducts, forms much the same cretaceous substances, except as to colour, that we discover in tumors, produced by gout in different parts of the extremities; therefore such aliment, as shall be least likely to create any liver fulness, should, by every person who is predisposed to gout, be principally adhered to. However, though liver affection may be considered as the most general cause for gout, yet delicacy and debility of the lungs, occasioning incomplete sanguification, together with general disproportionate blood vessels, and muscular fibres naturally weak,

weak, but still rendered more feeble by a sedentary life, may cause some obstruction, terminating in a fixed disease, to form, and the gout supersedes most others, as a cancer is the morbid extreme of glandular disease, ultimately ending in ulceration, scarcely curable; and though paroxysms of the first disorder give temporary relief, yet in the second disease, no effort of nature avails. The first, when threatening to offer, should be encouraged in all constitutions; the latter ought, in every stage, if possible, to be reasonably suppressed. It might then be supposed, that the seeds of both those disorders existed naturally, in particular habits; as an accidental injury on the female breast, has frequently been succeeded by an incurable cancer; likewise, a slight strain, in the ankle of a man, causing confinement, at the same time that the appetite had been too much indulged, has been known to produce gout in the injured joint; yet no such diseases would, probably, in either

sex,

sex, have appeared, if those accidents had not occurred. Doctor Caddogan's system of rigid abstinence from flesh meat and wine, to eradicate the gout, obtained a fair trial, but, in the end, was found both ineffectual and injurious. Some French empirics have administered drastic purges, which for years prevented the returns of any paroxysms, but the after effects were merely to enfeeble, and frequently to cause a loss of sight in one eye, or deafness in either ear, though neither of those organs were previously in such a state, as suspected, to become diseased. I have likewise known instances of robust young men, who restrained the gout, consequently supposed themselves secure from it, by bathing their hands and feet in cold water, night and morning; but in a few years they either died of bilious fevers, became asthmatic, or were seized with apoplexics. Equally bad effects have I observed from taking gum guaiacum, bark, or other potent bitters; for, where

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critical salutary impulsive efforts of constitution, are retarded and counteracted, though they often are supposed to be safely removed, by what are called specifics, yet bad effects are afterward manifested, in either the head, chest, or some delicate parts of the nervous system. However, when we consider the wretched state of any gouty subjects, and that this disease might have originated, either from their own errors, or those of their ancestry, especially from the first, it then becomes reasonable to investigate the most probable cause, the effects of which might be rendered lighter, though any hope of obtaining a radical cure may be groundless. I seldom knew of any person predisposed to gout, whose insensible perspiration was not irregular, and frequently the hands and feet quite hard and dry; others with a cold moisture, both which states of body are not perfectly natural, therefore forebode a future change in health. The latter constitution may be assisted, by procuring an

open

opener state of bowels; and the defective perspiration, in the second instance, may be, in some degree encreased by exercise, in addition to warm covering, especially on the extremities; and, if the limbs cannot bear motion, so as to afford some degree of softness, such other means should at times be tried, as may tend to relax the surface, without absolutely enfeebling, which may be safely effected by an occasional use of opiates, but not repeated if they should have any other operation, than merely to encrease defective perspiration, for which purpose I have experienced Dover's Pill to answer. The diet should principally consist of boiled meat, with tender vegetables, to which some spice might be added, to prevent flatulency. Fish for two days in the week may be eaten; and potatoes, provided they do not disagree, are more proper than entirely bread, both from their succulence, and narcotic quality, which effects are highly beneficial, when fibres are

naturally

naturally predisposed to a state of rigidity; whereas bread, especially if of the first quality, causes costiveness, and renders the blood too viscid, when men are sedentary, and cannot exercise in proportion to such strong sustenance, oatmeal boiled in water, either as gruel, or what is in some countries called stirabout, is both aperient and diuretic; likewise, from warmth, frequently throws out eruptions, which are attended by salutary effects, in most gouty habits; and wherever onions or garlic can be used, they safely attenuate the juices, and contribute to disengage any seeds of immature gout, with which the habit may be overcharged. But our principal care should be to refrain from all acids. I recollect having dined with a patient, who was both bilious, and a martyr to the gout; he refused eating potatoes at dinner, but retired into another room, where he found a dressed sallad, that I ordered to be removed from table, of which he suddenly eat a large

quantity,

quantity, and in a few hours expired, I suppose, both from the coldness of the vegetables that composed the sallad, and the quantity of vinegar which it contained; and on my immediately asking, why he made so free with what he must have known to be improper, he replied, that he never was more highly gratified by any food, that he had at any time taken. Here, then, have we a strong instance for the necessity of opposing the instinctive calls of our appetite, either in full health, or in a state of languid disease. Doubtless, in cases of ardent fevers, where the heat of body becomes intense, and skin dry, acids so far temper the rapid circulation, as to bring on gentle perspirations; likewise, in cases of putrescence, as antiseptics, they contribute to oppose further corruption; but in chronic complaints, where vital exertion may be required, especially in cachectic, or in gouty habits, but in particular the latter, acids chill and enfeeble. However, I have

heard

heard of many gouty subjects, who persevered in drinking cyder, taking bark occasionally, and living almost entirely on fish; who, from such a regimen, have found that the gout had at least been kept back for many years. But, in far the greater number who pursued that plan, an obstruction of the liver, followed by a dropsy in the lower belly, or chest, was ultimately the effect of this course, if not earlier taken off, by angina pectoris or apoplexy. Others have I recollected, whose joints became inflexible, likewise their countenances pallid, and afterward died asthmatic, having various small tumors through the entire cellular membrane, which never suppurated or gave way to any treatment.

From such instances, then, I should not be inclined to advise the use of acids, except occasionally, and in small quantity, to correct the richness of particular fish, or over fat meat. The least injurious, and most nutritive of all acids, is broken milk, in Ireland called butter-milk,

milk, which I have remarked some gouty subjects to drink at times; and, from the supposed benefit that they reported to have obtained, by a moderate use of this mild subacid, taken quite fresh, I should venture to advise a trial of it, with stirabout or toasted bread, only for breakfast, provided the subject was young, and had never complained of flatulency or bile. However, I recommend this diet more from the favourable report of those who have persevered in it, than from any reasoning that I can offer in support of acids for gouty habits, where certainly, if employed in a great degree, they must ultimately injure. Yet I am confident, should ever milk be advisable, it will answer best in this form; for, when new, it creates bile too plentifully, except in subjects who are thin in flesh, arid, and never could be considered bilious; but, as I before have observed, this diet should only constitute the breakfast meal, and does not preclude the use

use of animal food at dinner; whereas the taking of new milk, together with flesh meat, are too nutritive, except in cases of extreme debility, or very advanced age.

There is no nation, whose natives, especially the lower orders, are more irregular and intemperate than the Irish. Their principal excess consists, in the drinking of unmixed spirits, extracted from corn, commonly called whiskey. The general excuse pleaded, in support of such bad practice, is, that the climate being damp, and their sustenance chiefly consisting of potatoes, such a spirituous support, becomes necessary, as would be pernicious in warmer regions, whose inhabitants subsist principally on bread, fruits, and vegetables. However, though multitudes have been destroyed by this ardent liquor, yet it seldom or never produces the gout. If, then, any gouty subject chooses to hazard the change to partly a vegetable course, of which the potatoe should constitute

a principal

a principal share, I would recommend old whiskey, diluted with soft boiled water, to be drank after dinner, which will prevent any bad effects that might arise from the supposed coldness, or aqueous quality, of this most salubrious root.

The late Sir Richard Jebb adhered more uniformly to a vegetable diet, than almost any other valetudinarian, and pure water was his general beverage. Perhaps had he after dinner taken a reasonable share of well diluted spirit, he might have lasted longer. However, I would not wish to be understood as generally recommending the use of spirits in any form, where men possess a natural healthy state, but when obstructions, especially biliary, are likely to commence, and that flesh meat and potent wines shall contribute to favour their encrease; if, then, a vegetable or reduced course be considered advisable, I think that a certain degree of animation, caused by diluted spirit, may, in

most

most gouty habits, be both beneficial and safe, especially where pure Port or Madeira wine cannot always be procured; either of which, if adulterated, contains much more spirit, and of a more ardent quality, than would be drank in the liquor I recommend; and, were unadulterated wines even to be obtained, the salutary quantity should be much under what gouty subjects generally drink, who, from inability to exercise in the open air, long for the hours, and enjoyment of table society, which is heightened and protracted by wine, consequently the bounds of temperance are too frequently exceeded. This observation is further necessary, when spirit is mixed with water, which should only be in such proportion as to render the latter, sufficiently potent to become a safe beverage, as a sudden chill in the stomach might prove instantly fatal. Many practitioners in physic recommend issues in the thighs, which, in corpulent habits, where the breathing is dif-

ficult, may be of some use. Their irritation and discharge, for a certain time, might prevent the regular returns of paroxysms; but, as this discharge of humor is indiscriminate, not having greater effect on gouty matter, than on the juices in general, I fear in the end they only enfeeble, or, at the best, are not more than local drains, especially when they require stimulating applications to force discharge; therefore, if they shew a disposition to dry up, it is useless to attempt keeping them open. However, some, whose time is burthensome, like the employment and process of a refreshing dressing every day; therefore, except a patient be thin in flesh, and irritable, though I cannot in general say much in favour of issues, yet a wish for them in any one, not subject to those objections I have made, may be gratified. In most stages of this disorder, or, more properly speaking, the effect of a morbid habit, cordials, provided they are not too potent, may at times be

successfully

successfully administered ; and I have experienced that the Confectio Cardaica, mixed with peppermint water, to which some volatile spirit is added, to be safe in any constitution. However, in cases of the gout suddenly affecting the stomach, and nervous system, tansy, brandy, or usquebaugh are necessary to have at hand, but to be taken sparingly.

After the habit might be supposed to have discharged all gouty matter, if such I can call it, bark, or some similar bitter, is generally recommended. Doubtless the appetite is thereby encreased ; but, except that the stomach had been much relaxed, and digestion greatly impaired, I should with reluctance consent to the taking of any astringent, but more so to its continuance, as a rigidity of fibre, together with defective perspiration, are among the principal causes, at least the abettors of gout ; therefore, though particular constitutional relaxation might require the use of some astringent, yet its employment should

be strictly limited; and cold bathing, after the gout had once appeared, ought never to come into contemplation. And should any person suppose himself bilious, the same reasons against purging, which are prudent to observe, during the time of the gout forming, do not afterward operate, as the body then should be kept open, and the pores of the skin relaxed.

The propriety of those distinctions is evinced, by the effects of Buxton waters, where, whilst bathing, when a gouty fit is over, a patient recovers strength and motion daily; when, if bracing means of any kind had been employed, the inability to use the limbs, from encreased rigidity, would become more grievous. Therefore, after a fit of the gout has terminated, it is both safe and useful to bathe the limbs, in tepid fresh water; and though, in some instances, it may bring forward a short revival of the late paroxysm, yet it will cause a much longer absence of another

another gouty return, which should be, to every reasoning patient, more than an adequate compensation, for a degree of further confinement. Some prefer the warm salt bath, which, if too soon, or frequently used, would, I fear, brace the fibre, and constrict the mouths of cutaneous vessels, already too much contracted. Yet warm salt bathing, at such time as we are sure, that the habit is entirely cleared from all gouty matter, may, for a few baths, be both safe and effectual.

A necessity for the employment of mercury by friction, in gouty habits, has frequently occurred in the course of my practice; and the only change in constitution, that I experienced this process to have made, was by keeping back the natural regular paroxysm for a length of time, and when a fit returned, it was not additionally tedious or severe. I must observe that such instances were in young subjects. However, though I am cau-

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tious of using mercury in gouty constitutions, yet, should any contracted disease render it necessary, I would prefer it in the form of frictions, or blue pill, preferably to any other preparation. I have sometimes, in scorbutic complaints, where patients were likewise gouty, been induced to direct a course of mild sulphureous water, from which I experienced the gouty symptoms to be mitigated; and I have heard it remarked, that those waters are less liable to petrify than any other springs; and they certainly correct constitutional acrimony, without reduction of flesh or strength; therefore I should make no objection to the use of any sulphureous water, not absolutely purgative, in habits requiring correction, though gout should be the prevailing tendency, provided such course was not too long continued. But, if any waters are supposed to possess specific powers to regulate gout, the Bath waters, under certain restrictions, claim a preference. However, any

change

change in regimen, or alteration in fluids, either as to quantity, quality, or continuance, require the most mature deliberation. And whenever the stomach becomes affected, either from any thing improperly taken in, or from the common course of gout, a vomit, of ground mustard, or warm port-wine, will seldom fail to produce most salutary effects. And, in the first instance, it is much better that discordant aliment, should be discharged from the stomach, than to remain; which, with great distress and difficulty, could only make crude and unassimilated chyle, producing encrease of disease. And, in the second case, the circulation, propelled by the action of vomiting, determines to the extremities, what, by resting interiorly, might put a period to existence. However, the bowels should be freed, and the head not feel loaded, whenever this measure is put into execution.

On the whole, as the gout is more likely to arise, and encrease, both from the quantity and quality of what we daily drink, than from the solid food which we eat, a selection and abridgment in the first may be principally necessary; and if exercise can be taken, it will carry off any redundance arising from the latter. But the opinion that, in proportion to the quantity of strong sustenance which we may use, so should the vinous beverage be encreased, is ill founded, and has been productive of infinite mischief, as, after sufficient dilution, further taking in of wine is at least unnecessary, and, in most constitutions, ultimately injurious.

ON

# THE COW POCK.

## CHAPTER III.

NOTHING can be more unwise in belligerent nations, than to underrate, either the valour, or resources, of any power whom they mean to subdue. This observation may be applied to the strenuous advocates for inoculating with the Cow Pock, who do not pay sufficient attention, either to the time in life, or state of constitution, of those who undergo that process; which, if correctly conducted, effectually secures any person against the small pox, however epidemic and malignant. This truth I am convinced of, from having in vain attempted, by various modes, to bring that dreadful disorder on

children

children who had been inoculated a considerable time before with the cow pock. Therefore I do not hesitate to determine in my own mind, that, if any failure or disappointment, after vaccine inoculation, should occur, such must arise in consequence of the infection not being genuine; given at too early an age, in too cold a season of the year, or the child not being sufficiently supported, and cherished, whilst under this process. I must first observe, that no disease should be introduced, or considerable operation performed on any child, whilst what a nurse calls the red gum continues to come out; which eruption I suppose to be in a great degree caused by the biliary secretions, not being at so early an age adequate to the encrease of chyle and blood, created by the perpetual taking in of milk; and the pores of the skin, not yet sufficiently pervious, to admit of regular insensible perspiration; consequently the redundant juices,

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after the salutary purposes of nutrition have been answered, are thrown off by eruptions, in addition to copious stools, of different consistence, and colour. Therefore, in most infantile attacks, the reasoning practitioner, relies little on perspiration, but depends principally on the early employment of different purgatives, till such time as the child's general constitution becomes more confirmed, which is scarcely to be expected sooner than the third month, as, previous to that period, both solids and fluids are not so distinct, as they shall become afterward; consequently any humor, especially of an infectious nature, shall be more liable to spread and remain, through defect of general energy, to expel it. Such being the state of infants, when very young, the cow pock should not be introduced too early. This caution is further necessary, as gentlemen, who profess midwifery, are too frequently prevailed on to inoculate children, before such time as their

their attendance on the mother had ceased; partly from the natural impatience of a parent, to get over this important event, as well as to include both the doctor's services in one remuneration.

We shall then suppose that the best time, for performing this important office, has been maturely decided on. Our first care should be to procure genuine infection; as matter taken from any ulcer, matured eruption, or abscess, shall create a certain degree of inflammation, and frequently ulceration, when applied to a different subject, though such matter would not infect any part of the same body, from which it had been taken. Therefore it may be concluded, that, though the infection shall appear to have taken place, yet should there be any failure or insecurity, against a future small pox, we must attribute such miscarriage, to the matter not being absolutely vaccine, or perished before it had been introduced. Moreover,

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the treatment of any patient, for the cow pock, should materially differ from what was practised in the former process of inoculating, for the small pox; when exposure to the open air, and a cooling regimen, though in part necessary, yet were carried to a dangerous extreme, and which, I have great reason to believe, might afterward have been the cause of swellings and collections, assuming scrophulous appearances, especially in languid children, where the infection had been given too early in life. Now, though the entire progress of the cow pock, commences and terminates chiefly on the inoculated part, yet, if the matter did not entirely pass into the system, we must conclude its operation to be only local, therefore incomplete; and if, after so entering, it was not discharged in some manner, any inoculated person could not be considered as entirely freed from the future bad effects of this contamination, of which I have seen recent instances

stances, by tumors forming in the arm-pits, likewise in the groins, also a large deep-seated abscess in the thigh; yet not one of those contained such matter as is usually discovered in scrophulous suppurations, and all healed in a short space of time, after either bursting, or being opened. But the most remarkable case, within my recollection, was that of a fine boy, six months old, who, from a little after birth, was seldom free from eruptions on different parts of his body. However, he was inoculated with the cow pock; but, in a few weeks after his supposed recovery, he was suddenly attacked with vomiting, and other symptoms of hydrocephalus, for which the usual means were employed, but ineffectually. On opening his head, the surface of the brain was spread over with a yellow fluid, likewise a quantity of discoloured serum, in both ventricles; therefore I entertained no doubt, but that his death was caused by the vaccine infection,

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in conjunction with some remains of his own constitutional acrimony, which, if not excited by an addition of this new matter, might have cleared off in due time, so as at a more advanced period, to have left him in sufficient good condition to receive, and get clear of the cow pock. From such consideration, the parents of this child waited till the second brother became nearly one year old, and then inoculated him with the vaccine infection, which went on as could be wished, and he is now an healthy child, free from any complaint. Therefore I have little doubt, but that the death of the elder son was caused by the introduction of matter, into an habit already predisposed to acrimony, partly from debility, which would in time have been surmounted. Certainly all those unpropitious cases were too much exposed to the cold air, and the process commenced rather late in the season, on which account I should prefer the spring and summer,

mer, exeept in the dog-days; and, were it ineonvenient to wait till the winter was over, the child should not be sent out, exeept under warm clothing. It has ever been remarked, that, when a natural small pox is preceded by perspiration, the disorder is thereby rendered milder, mueh of the poison being carried off through the pores of the skin. From sueh fact, I think, that it would be advantageous for every child, who undergoes the proeess of inoculation for the eow pock, (which should not take plaee before three months old, exeept that the child was remarkably strong, and free from every appearance of complaint), first to be bathed in warm water, afterward well protected from cold, espeeially its legs and feet, also occasionally to drink wine whey; and, for sueh who cannot afford wine or eordials, a sufficiency of any warm dilution, espeeially for the nurse; with every other means, calculated to enable the habit to discharge the

infection

infection introduced. Such treatment, where the arm appears much inflamed, may, by some, be considered too heating. However, a certain degree of local warmth, and constitutional support, are the safest and most effectual means to pursue, in all inflammations, founded on infection, which should ultimately terminate by suppuration, that being, in such cases, the only final salutary crisis. This we may observe instanced in the natural small pox; where any eruptions, or tumors arise, after the pock is supposed to be over, constitutional support of every kind is the only certain mode of restoring the former health; and reduction shall protract recovery, by encreasing the morbid effects of the late disease.

On the whole, it is to be hoped that communicating the vaccine infection may yet be brought to a greater certainty. And whoever has observed a wretched mortal

sinking under a confluent incurable pock, or, if surviving, with a loss of both eyes, and in some infantile cases, after the most correct inoculation, previous to the eruption, convulsions coming on, which never could be allayed, surely will not hesitate to employ the cow pock, though even to repeat the process, should the first or second insertion not take place; there being no further management necessary, except such caution, with respect to warmth, as I have pointed out; from which being neglected, especially where the arm had been exposed to the air, I have known alarming convulsions to come on, merely from exposure of the part, considering it as a wound or ulcer chilled, and deprived of that common process of digestion, which is certainly the necessary course of any inflammation with ulceration. The like bad consequences nave I observed, when spirits were applied, on a raw surface, occasioned

sioned by boiling water, which application was certainly proper, before the blister bursted, but, after the scarf skin had been removed, they dangerously dried, and irritated the denudated extremities of nerves, and caused convulsions, till removed. From such instances, of bad symptoms arising merely from exposure and inattention to the arm, I always cover up the part, over which, especially when the weather is cold, I apply soft paper, that effectually excludes all external air; and, in some few instances, I have used the fermenting poultice, with such further cherishing means, as shall promote the necessary digestion; for, as we know of no other channel, through which the matter introduced so evidently discharges itself, we should make the most of that local drain. No doubt, but where any infection is communicated to a person previously free from humor, it is most completely expelled, by a rejection

nearly in the original form, or by some substituting eruption on the surface; but that not being commonly the course of this contamination, we should employ every means locally and constitutionally to form, mature, and ultimately to expel the disease; otherwise the juices, though previously pure, must remain more or less polluted, as no active matter can rest innoctious. And, notwithstanding that we may be sometimes disappointed after our inoculating for the cow pock, yet hitherto no reasonable objection can be made to defeat so happy discovery; and though the vaccine matter, is at present supposed to be the only species of infection that shall answer the intended purpose, yet it is possible that time and chance may yet produce some similar mode of acting on the human juices, so as to effect the desired end; which improvement, should we revert to the former mode of inoculation, would be entirely defeated.

I some years ago cut an issue in a languid epileptic subject, and, for the purpose of procuring a complete discharge, did not dress the wound for six days, at the expiration of which time, the arm became so much inflamed and ulcerated, as to cause fever, succeeded by an eruption, which matured like a small pox, and, after continuing out for some days, gradually declined. However, the arm remained ulcerated, requiring attention for a considerable time afterward. All those consequences arose from the stagnation, corruption, and resorption of the juices in the part, which acted like foreign virus, though in their own system. From hence we may conclude, that the present mode of inoculation being but a late discovery, and that, though at this day, efficient matter is only supposed to be taken from the cow, yet we are not to despair, but that similar resources may be found; until which

period,

period, let us adhere to, and, if possible, improve the present process, which, from what I have observed, only requires warmth and support to render it safe and effectual.

FINIS.